IN THE CLAIMS:

Please amend claims 1 and 4 to read as follows:

1. (Currently Amended) A method for manufacturing a thermoplastic synthetic integral foam board having a coarsely porous core, sealed and smoothed side surfaces and at least one ~~smooth~~sealed and smoothed side edge, said method comprising the steps of:

- mixing a thermoplastic synthetic material in an extruder;
- extruding the thermoplastic synthetic material through a wide-slot nozzle to form a flat plastic web;
- cooling and calibrating ~~of~~ the plastic web on a calendar roll pair;
- drawing off the plastic web; and
- heating the side edge of the plastic web in a guide groove of a smoothing device to at least a melting temperature of the thermoplastic synthetic material following calibration, while pressing the contact surface of the smoothing device against the side edge to smooth and densify the thermoplastic synthetic material, thereby to smooth and seal the coarsely porous core ~~and~~ while simultaneously maintaining adjacent peripheral surface areas of the plastic

web ~~are kept~~in the smoothing device at a temperature below the softening temperature of the thermoplastic synthetic material by cooling.

2. (Previously Presented) A method as set forth in claim 1, wherein the thermoplastic synthetic material is hard PVC.

3. (Canceled).

4. (Currently Amended) A method as set forth in claim 1, wherein ~~the~~a longitudinal ~~sides~~side of the plastic web ~~are~~is trimmed prior to heating the side ~~edges~~edge.

5. (Withdrawn) A smoothing device for a side edge of a plastic synthetic board, with a guiding groove with at least one heating means in a face area, each with at least one cooling means at ~~the~~ side areas located on opposite sides, where a thermoplastic synthetic board, which can be guided in a guiding groove, rests with its cutting edge against the face zone and with its peripheral surface zones against the side areas.

6. (Withdrawn) A smoothing device as set forth in claim 5, wherein at least one thermal insulating layer is provided between each of the heating and cooling means.

7. (Withdrawn) A smoothing device as set forth in claim 6, wherein at least one insulation zone formed by a groove or a borehole, which stretches across a major portion of the smoothing device, is located between a cross-sectional zone with a heating means and at least one cross-sectional zone with a cooling means.

8. (Withdrawn) A smoothing device as set forth in claim 5, wherein the heating means is formed by at least one heating channel in which a heated liquid is flowing.

9. (Withdrawn) A smoothing device as set forth in claim 5, wherein the heating means is formed by at least one electrical heating cartridge.

10. (Withdrawn) A smoothing device as set forth in claim 5, wherein the heating means stretches across 0.4 to 0.6 times the length of the smoothing device.

11. (Withdrawn) A smoothing device as set forth in claim 5, wherein the cooling means is created by at least one cooling channel which has a cooling liquid flowing through it.

12. (Withdrawn) A smoothing device as set forth in claim 10, wherein the cooling channels are fed by a common cooling liquid lead line.

13. (Withdrawn) A smoothing device as set forth in claim 5, wherein at least one of the side areas of the guiding groove exhibits an inlet slant towards the outside of the device.

14. (Withdrawn) A smoothing device as set forth in claim 5, wherein the smoothing device is supported in a spring-loaded manner and is movable perpendicular to the face area.

15. (Withdrawn) An edge machining system for a side edge of a plastic synthetic board, comprising of at least one smoothing device as set forth in claim 5, and a guiding device, said system comprising, in combination:

- a movable carriage for receiving at least one synthetic board;

- at least one securing means for securing the synthetic board on the carriage; and

- a drive device for moving the carriage in relation to the smoothing device.

16. (Canceled).

17. (Withdrawn) An edge machining system as set forth in claim 15, wherein at least two smoothing devices are provided, which are arranged symmetrically to one another with regard to the direction of movement.

18. (Withdrawn) An edge machining system as set forth in claim 15, further comprising a rotation device with which the synthetic board can be rotated relative to the carriage.

19. (Withdrawn) An edge machining system as set forth in claim 16, further comprising a rotation device with which the smoothing device can be rotated relative to the synthetic board.

20. (Withdrawn) An edge machining system as set forth in claim 15, wherein the distance of the smoothing device to a symmetric axis of the synthetic board is adjustable.